

Abstract

A regulator circuit for use with integrated circuits protects downstream devices from the application of unregulated voltages during start-up or other initialization. The circuit includes an op amp which controls a regulator during steady state operation, and also includes a switching portion which responds to a reset signal and disconnects the op amp from the voltage regulator to prevent unregulated voltages from reaching the output node during start-up. During start-up, a current mirror is used to supply an initial voltage reference to the op amp, and upon establishment of steady state operation, the regulator turns off the current mirror and reconnects the op amp to the voltage regulator to allow the op amp and voltage regulator to control the output node.